

METHODS AND APPARATUS FOR DETERMINING A DIRECTION OF ARRIVAL
IN A WIRELESS COMMUNICATION SYSTEM

ABSTRACT OF THE DISCLOSURE

5 Methods and apparatus are provided for determining a direction of arrival (DOA)
(46) of a Radio Frequency (RF) signal (32) transmitted by a remote unit (22) in a wireless
communication system (20). The methods comprise receiving the RF signal (32) with
multiple antennas (34,36,38,40,42,44) of the antenna array (26) and determining a
preliminary direction of arrival (DOA) (78) for the RF signal (32) received with the multiple
of antennas (34,36,38,40,42,44) of the antenna array (26). The methods also comprise
selecting a coefficient (80) for the antenna array (26) based at least in part upon the
preliminary DOA (78), modifying the RF signal (32) with the coefficient (80) to generate a
modified RF signal (82), and determining the DOA (46) of the RF signal (32) with the
modified RF signal (82).